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Notice of Allowability	Application No.	Applicant(s)	
	10/774,292	DEMARTINI ET AL.	
	Examiner	Art Unit	
	Brian Young	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 3/4/05.
2. ☒ The allowed claim(s) is/are 21-40.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 11/30/04.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

1. Claims 21-40 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: a circuit for converting a binary input signal corresponding to an n-bit thermometer code into a binary output code, including: in particular a first number of OR gate circuits configured to receive bits of the n-bit thermometer code; a first adder coupled to receive output signals from the first number of OR gates, the first adder providing at an output at least one binary output signal of the binary output code; a second number of multiplexer circuits having data inputs configured to receive bits of the thermometer code, the second number of multiplexer circuits further including at least one selection input coupled to receive at least one binary output signal from the first adder; and a second adder connected downstream of the multiplexer circuits to receive a multiplexer output therefrom, the second adder operable to provide at an output thereof at least one further binary output signal of the output binary code, has not been shown in the prior art of record.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lewyn discloses a system wherein binary bits of increased binary significance are converted to a first plurality of thermometer outputs. A plurality of switching assemblies, each preferably recursive and preferably formed from a plurality of switches (e.g. transistors), process individual pairs of successive ones of such

thermometer outputs. Each stage respectively produces first or second outputs or the analog output for first, second and third relationships between the thermometer outputs in such pair. The analog output has a variable value between the first and second outputs depending upon the value of the least significant binary bits. When the binary value is represented only by the binary bits of least and increased binary significance, the first, second and analog outputs are combined to produce an analog output representative of such binary bits. When the binary value additionally includes binary bits of even greater binary significance, an additional decoder decodes such binary bits to produce a second plurality of thermometer outputs. Second pluralities of switching assemblies, each plurality preferably having a construction corresponding to that of the first plurality, receive individual pairs of the thermometer outputs in the second plurality and produce the first or second outputs or an individual one of the outputs in the first plurality. These thermometer outputs are combined to produce an analog output representative of all of the binary bits. The second pluralities of switching assemblies comprise a number corresponding to the number of thermometer outputs in the second plurality.

Knierim , et al. disclose A first subset of components of a first set of pairs of complementary differential electrical signals representative of a numerical value expressed in a multi-bit thermometer code, is processed in accordance with a first set of Boolean functions to produce a first set of output electrical signal components , and a

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second subset of components of the first set of pairs of complementary differential electrical signals is processed in accordance with a second set of Boolean functions to produce a second set of output electrical signal components. The first and second subsets and the first and second sets of Boolean functions are such that the first and second sets of output electrical signal components when combined form a second set of pairs of complementary differential electrical signals representative of the same numerical value expressed in a second multi-bit code with fewer bits than the multi-bit thermometer code.

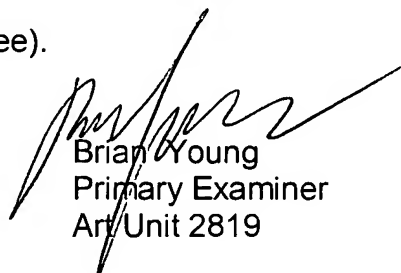
3. The corrected drawings that were required in the previous Office Action were received on 3/4/05. These drawings are approved.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Young whose telephone number is 571-272-1816. The examiner can normally be reached on Mon-Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian Young
Primary Examiner
Art Unit 2819
